



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE AMERICAN NATURALIST

VOL. XXXI.

January, 1897.

361

A GROOVED STONE AXE FROM THE OHIO DRIFT.

BY H. C. MERCER.

Mr. E. W. Claypole in the *American Geologist* for November, 1896, says that Mr. Elmer E. Masterman, in the summer of 1896, found a grooved greenstone axe of common aboriginal American type, *in situ*, twenty-two feet down in a deposit of what Mr. Claypole regards as glacial gravel, near New London in southeast Huron County, Ohio. The latter quotes the finders narrative which declares that he, Masterman, while digging a well, without witnesses, found the axe bedded in a stratum of tough blue clay, in which, after removal, it left its impress. Above it rested one foot of coarse gravel, covered by thirteen feet of silty material banded with films of sand, and overlaid finally by a superficial covering eight feet thick of clay and stones.

Mr. Claypole who has wisely examined the case on the spot, cites in favor of the genuineness of the discovery, the extraordinary decomposition of the greenstone specimen, which when sawed in half was found to be rotted or leached (he thinks by contact with sulphurous water) almost entirely through its interior, a process lasting probably a long time, while a series of concentric limonite stains like the year marks on a stump, exposed on the sawed cross section, seemed fur-

ther to testify to the long continuance of the work of disintegration, and preclude, in Mr. Claypole's opinion, the fear of "doctoring" as by any of the artificial processes used to patinate or age flints in England and France.

On the other hand, further data furnished by Masterman and fairly cited by Mr. Claypole invite doubt. Masterman is a collector who has been gathering specimens for the last ten years "at various depths in the gravel" without having made the fact generally known to archeologists, namely: *a green stone celt*, not much leached, five feet deep in the clay, in 1889; *a green stone axe*, somewhat leached, in 1882, seven feet deep in the gravel; *a partly finished celt*, not leached, chipped, and a little polished, in 1895, marked "13 ft. deep in the gravel;" *a large chipped shovel-shaped blade* of veined slate, found by Mr. D. White, on July 14, 1884, five feet deep in the gravel, and given to Mr. Masterman; *a spear-head of red flint*, found at a depth of seven feet while digging another well, together with other specimens believed by their discoverer to be of glacial age, while it is further stated that in the well where the axe in question was found Masterman had previously unearthed at a considerable depth in the gravel *a small arrow or spear-point of white stone*.

If the gravel deposit at New London is really glacial drift, and if the objects enumerated above have been found in it *in situ*, let us hope that further discoveries will follow as they have followed the first findings at the important drift beds of Europe. Let us hope that Mr. Claypole has prepared Mr. Masterman for a temporary preservation of the records in future, and for the calling in of witnesses, while it may be supposed that not a few archeologists would gladly seize the opportunity of hurrying to New London on wire, to see an exposure of the gravel where one or more signs of human handiwork could be shown protruding from the stratified drift, or where, as at Caddington or Hoxne, Chelles, Amiens or Abbeville the discovery of other such objects could be reasonably guaranteed. Should the evidence become generally satisfactory we need not be troubled because the object thus found in American drift is polished, while all blades of human handiwork till now procured from

European drift are chipped and never polished, since though much evidence has been accumulated to show that man chipped before he polished stone in Europe, the testimony of Africa, Asia and America is not yet in upon such sequence in the development of the stone craft of primitive man.

THE BIOLOGIC ORIGIN OF MENTAL VARIETY, OR HOW WE CAME TO HAVE MINDS.

BY HERBERT NICHOLS.

Continued from Vol. XXX, p. 975).

The widely popular theory of like nerve currents having been put out of the field, it remains for us to examine the rival one that the afferent nerve currents differ correspondingly with the forms of sense which they mediate. Before doing so it is well for us at this point to recall the main purpose of this paper as a whole, and the somewhat tortuous course of its investigations from the beginning. Our main object, as our title states, is to discover how man came to have such a mind as he now has; or, put otherwise, to discover the origin of our mental diversity and its relationship to our organic evolution. At the outset we found it doubtful whether protoplasmic life originated with one sense or with many. We next determined that molecular differences, underlying our various senses, must have been determining factors of their own selection and survival, and that therein, when rightly followed out, must lie the key to the secrets we are in search of. Alternative theories regarding these molecular differences then presented themselves, one of which we were enabled to dispose of. And we are now left with the probability that the afferent nerve-currents differ correspondingly with the forms of sense they mediate, and with the task of examining what light this fact sheds on the origin of our minds, and on the question whether life began with many senses or with one.